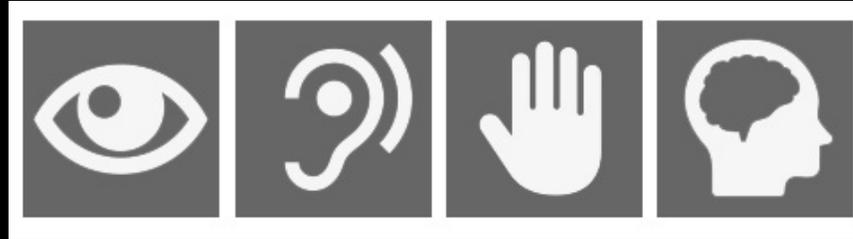


An Introduction to Web Accessibility



Mark Greenfield
Digital Strategist
Marketing & Communications
Academic Affairs

Outline

1. Introduction to Web Accessibility
2. The Legal Landscape
3. Basic Training for Content Creators
4. Concluding Thoughts
5. Questions and Answers

Web Accessibility

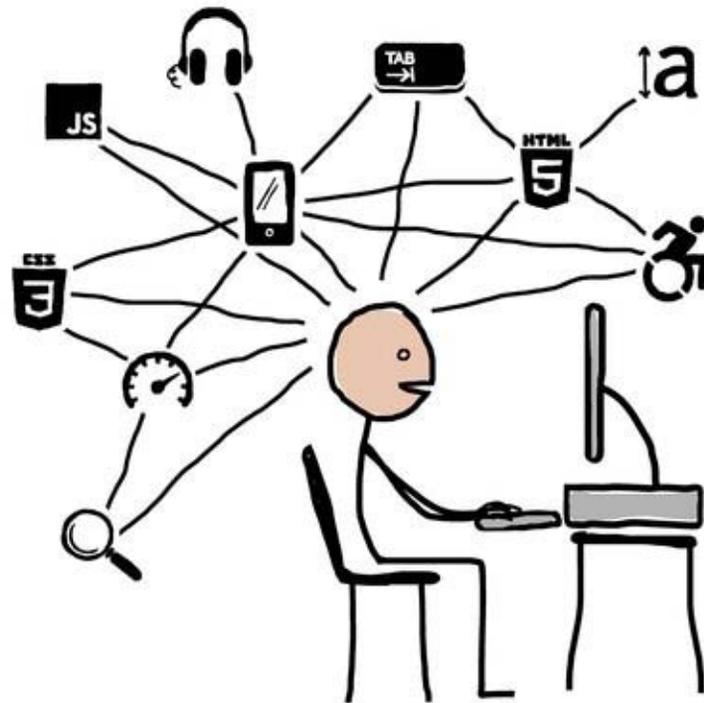
Refers to the inclusive practice of removing barriers that prevent interaction with, or access to websites, by people with disabilities.

Inclusive Web Design

'The design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible, without the need for special adaptation or specialized design.

INCLUSIVE DESIGN PATTERNS

Coding Accessibility Into Web Design



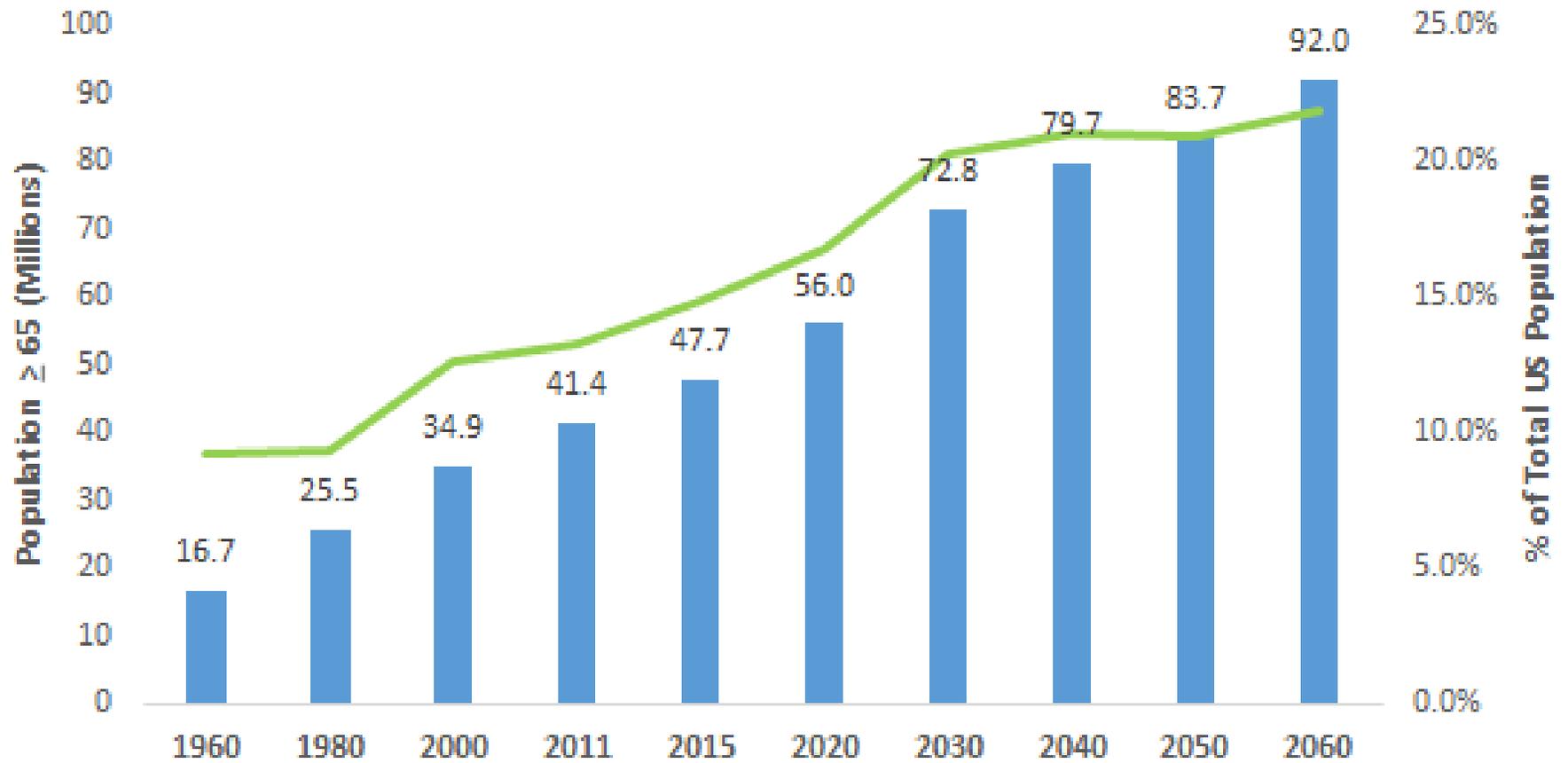
 **SMASHING**
MAGAZINE

by Heydon Pickering

The Other 20%

According to the U.S. Census figures for 2000, 20% of Americans have a disability that impairs access to websites and Internet content.

US Population 65 Years and Older



Source: US Census Bureau

Web Accessibility and Usability

- There is a strong correlation between accessibility and usability.
- What is a usability issue for the general population can be a barrier to people with disabilities.
- Addressing accessibility issues often improves the user experience for everyone.



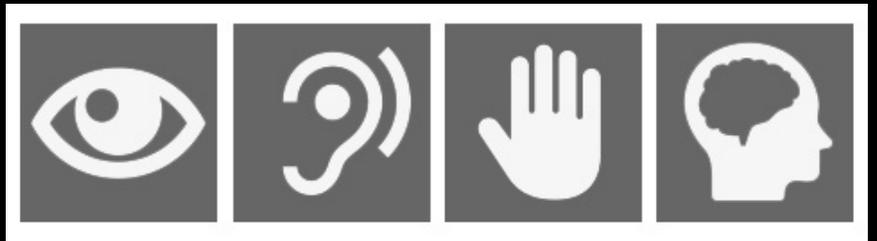


Closed Captions

80% of viewers using closed captions are not deaf or hard of hearing

Four Types of Disabilities

1. Visual
2. Auditory
3. Motor
4. Cognitive



Visual

1. Blindness
2. Low Vision
3. Color Blindness

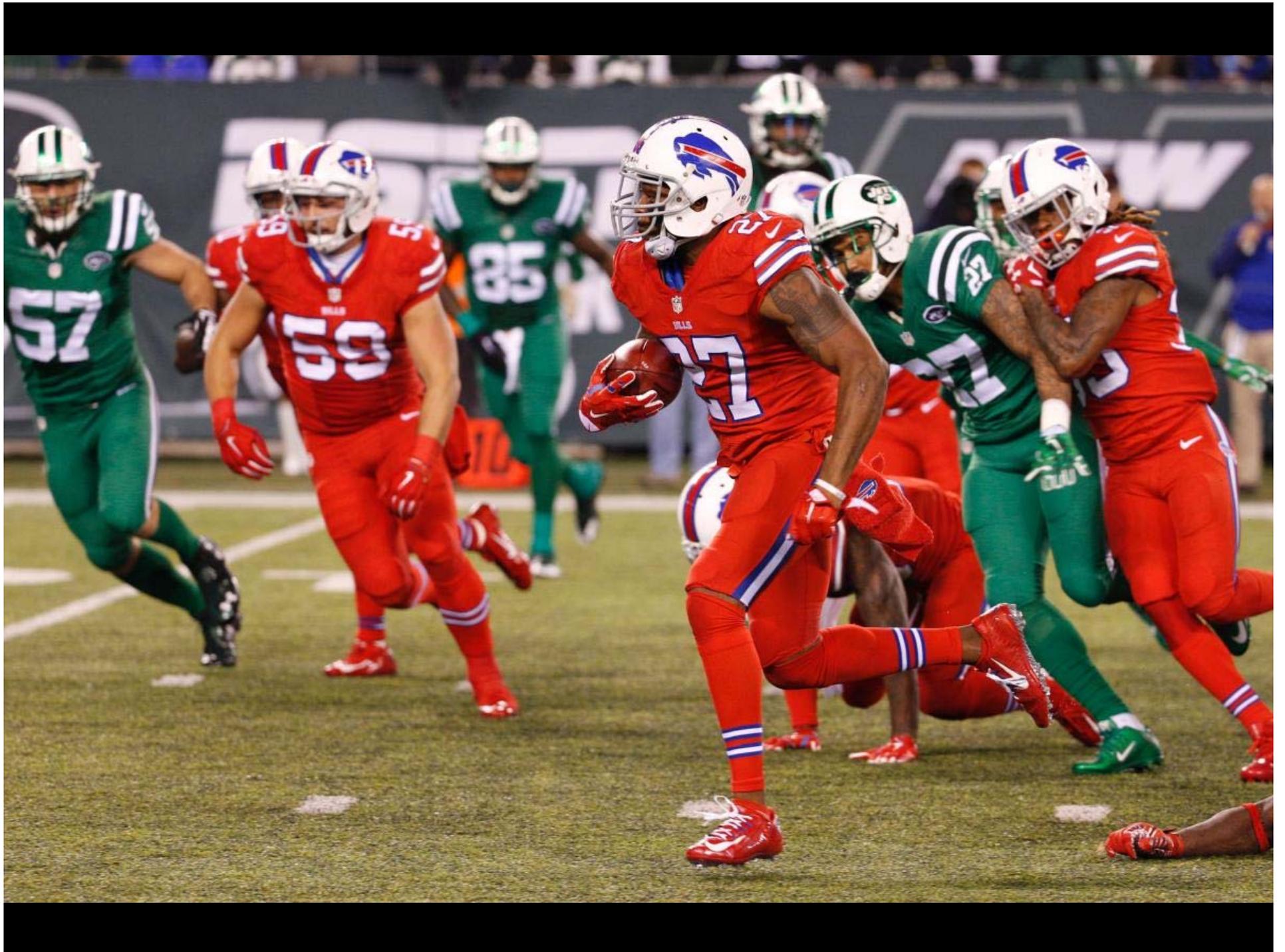
Screen Readers

1. Most popular include JAWS and WindowEyes
2. Free versions include NVDA and Apple VoiceOver
3. Challenges
 - Reliance on the keyboard
 - Images with no meaningful alt text
 - Repetitive items that can't be skipped
 - Poor headings
 - Poorly structured forms

Autoplay Videos

Auto playing animations or video that includes music or audio makes some web pages all but impossible to access because the audio completely obscures the speech of the screen reader.

This means that the blind user can't hear the screen reader and therefore they can't navigate to the 'Stop' button (if there is one) to stop the noise.





Lawrence Tynes 

@lt4kicks

 Follow

If you are colorblind like me this @NFL game is going to be hard to follow. @buffalobills vs @nyjets

8:33 PM - 12 Nov 2015



139



154





Auditory

1. Mild to severe hearing loss
2. Reliance on sign language and lip reading
3. Provide transcripts and closed captioning for audio and video
4. YouTube automatic captioning is rarely sufficient

Auditory

UB Overview



{music playing} Buffalo is more than a city, it's a state

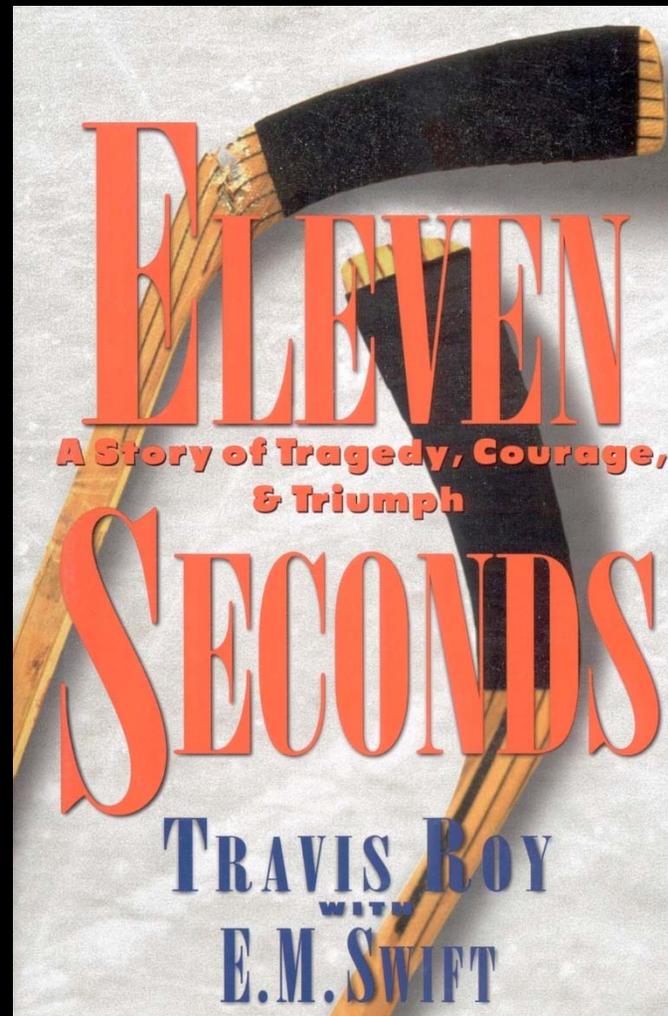
0:05 / 1:23

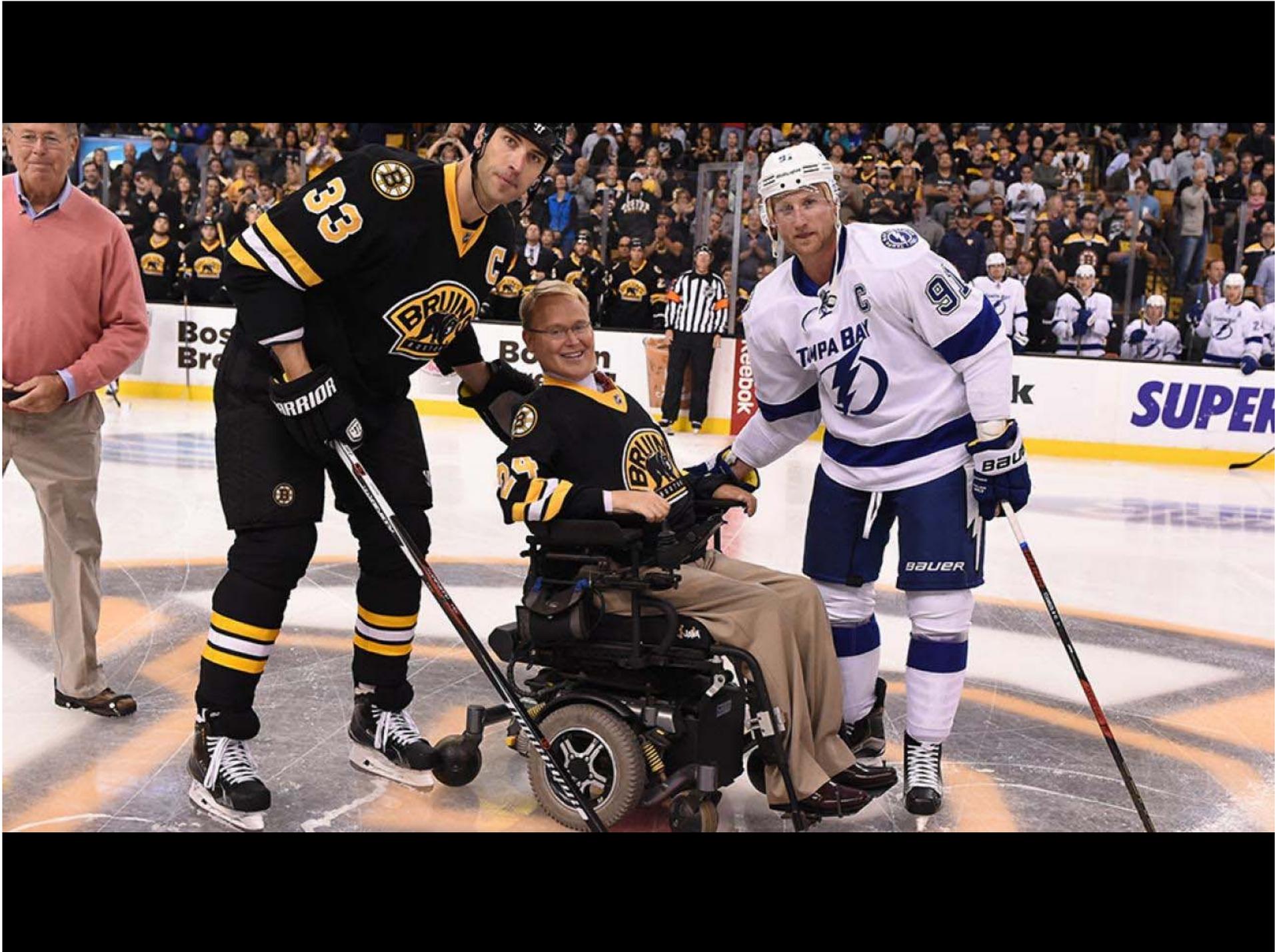


Motor

- Traumatic Injuries
- Diseases and congenital conditions
- Not everyone can use a mouse, click on small links, or operate dynamic elements effectively.
- Assistive technologies include a mouth stick, head wand, sip and puff switch, oversized trackball mouse and adaptive keyboard

Motor





Cognitive

1. Challenges include too many objects displayed at once, too much text, too small text, and a lack of logic.
2. Basic usability principles can make a big difference.
3. Videos that automatically start on a website can be frustrating and even distressing for users with cognitive impairments, impeding their ability to concentrate when reading.
4. Take a 'less is more' approach.

Eric Meyer – Designing for Crisis



A screenshot of the website for The Children's Hospital of Philadelphia (CHOP). The page is titled "For Patients and Visitors" and features a navigation menu with options like "Health Information", "For Patients and Visitors", "Specialties and Services", "Locations", "Find a Doctor", and "About Us". The main content area includes a section titled "What to Expect During Your Child's Visit" with a sub-header "For Patients and Visitors" and a list of links for "Type of Visit" (Outpatient Visit, Inpatient Visit, Emergency Department Visit). There is also a "Contact Us" section with the phone number 215-590-1000 and a "Get Driving Directions" section with a "Starting Address" field and a "Your Destination" dropdown menu. The footer contains various links and information, including "Web Accessibility", "Awards and Honors", "Legal", "Short Cuts", "Family-Centered Care", "Social Media at CHOP", and "An Equal Opportunity Employer".

The Legal Landscape

Federal

- Americans with Disabilities Act (Title II)
 - Program access
 - Effective communications
- Section 508
 - Part of the Rehabilitation Act of 1973
 - Section 508 Refresh (January, 2018)

Competing Standards in the U.S.

Web Content Accessibility Guidelines (WCAG)

- Published by the World Wide Web Consortium (W3C)
- WCAG 1.0 published in 1999
- WCAG 2.0 published in 2008
 - Three conformance levels (A, AA, AAA)

Section 508

- Different set of guidelines from WCAG
- Applicable to agencies that receive federal funding



[Home](#) » [Section 508 Standards Refresh Toolkit](#)

Section 508 Standards Refresh Toolkit

The following guidance will start agencies on the path to ensuring their information and communications technology (ICT) supports accessibility through conformance to the revised Section 508 standards. Additional guidance for coordinators, developers and procurement officials is being developed and will be added to this toolkit in the near future.

Revised Section 508 Standards

- [ICT final standards and guidelines](#) (January 2017)
- [Overview of the 508 Refresh Rule](#)  - Access Board webinar (January 31, 2017)
- [About the ICT refresh](#)
- [Overview of changes](#)
- [Compliance dates](#)
- [About the Update of the Section 508 Standards and Section 255 Guidelines](#) (April 2017)

Implementation Guidance

- [Testing](#)
- [Section 508 Transition Support Initiative](#)

Get Help

- [Training](#)
- [Ask an expert](#)

News and Events

- [Section 508 Refresh- ICT Final Standards and Guidelines](#) 
(January 31, 2017 - Archived Webinar)
- [WCAG 2.0 and the Revised Section 508 Standards](#) 
(March 28, 2017 - Archived Webinar)
 - [Upcoming Training Opportunities](#)

[\[contents\]](#)



Web Content Accessibility Guidelines (WCAG) 2.0

W3C Recommendation 11 December 2008

This version:

<http://www.w3.org/TR/2008/REC-WCAG20-20081211/>

Latest version:

<http://www.w3.org/TR/WCAG20/>

Previous version:

<http://www.w3.org/TR/2008/PR-WCAG20-20081103/>

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Wendy Chisholm (until July 2006 while at W3C)
John Slatin (until June 2006 while at Accessibility Institute, University of Texas at Austin)
Jason White (until June 2005 while at University of Melbourne)

Please refer to the [errata](#) for this document, which may include normative corrections.

See also [translations](#).

This document is also available in non-normative formats, available from [Alternate Versions of Web Content Accessibility Guidelines 2.0](#).

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<https://www.w3.org/TR/WCAG/>

18F Accessibility Guide

🔍 Search - click or press '/'

Home

Checklist

Tools

Keyboard access

Images

Color and contrast

Forms

Flashing

Page titles

Headings

Hidden Content

Landmarks

Multimedia

Timeouts

Home

This site is currently in **Draft** as it's still being built. It will eventually contain resources for all things accessibility, development best practices, testing guides, and tools.

Accessibility is one of the most important aspects of modern web development. Accessibility means the greatest number of users can view your content. It means search engines will be able to read your site more completely. Users of all types will have a better experience if you take accessibility concerns into account. And least of all, it is a required by law for all federal EIT products to be accessible (with a few minor exceptions).

Accessibility works best when incorporated into an agile production environment. It's very hard to adequately address accessibility concerns at the end of a project, but if taken into account at the beginning, it's quite straightforward and cost effective. The best and perhaps only way to ensure this is done, is training and education. Every member of a production team should be aware of what accessibility concerns are and a basic understanding of how they are addressed.

Here at 18F we follow [WCAG2.0 AA](#) as our standard for accessibility. We do this for a couple of reasons. WCAG has long been the gold standard for accessibility on the web. The access board has also been working on a refresh to the correct 508 standards to incorporate WCAG2.0 AA into the standards. This sets us up for a smooth transition when that happens. Finally, under 1194.5 of the section 508 standards allows us to use a set of standards that meet the current standards.

If you have any questions about accessibility, 508, or would like help, please reach out on the [GitHub Repo](#).

Disclaimer: This resource is intended to help 18F develop accessible products and is not a replacement for the standards defined by the Access Board. Please visit the [Access Board](#) for information on 508 and their compliance criteria.

<https://accessibility.18f.gov>

The Legal Landscape

State of New York

- NYS P08-005 (Follows the Section 508 Standard)

University at Buffalo

- New policy is under development
- WCAG 2.0 AA standard



[audioeye.com](#) | [nClusion Blog](#)

School ADA Website Accessibility Complaints on the Rise

26 AUGUST 2016 on [Accessibility Law](#), [Industry News](#), [Education](#), [nClusion](#)

From [Education Week](#) - "Advocate Moves Needle on Website Accessibility."

What You Need to Know

- Educational establishments are being investigated in response to complaints received by the Office for Civil Rights.
- Complaints on disability discrimination were high with a focus on website accessibility.
- The U.S. Department of Education's has reached settlements in response to complaints received.

Categories

[AudioEye Originals](#)

[Newsletters](#)

[From Around the Web](#)

[Press Releases](#)

[Accessibility 101](#)

[Thought Leadership](#)

[Industry News](#)

[Business Advantage](#)

[Accessibility Law](#)



Higher Ed Accessibility Lawsuits, Complaints, and Settlements

Higher educational institutions face liability for inaccessible web content and technologies.

Atlantic Cape Community College (ACCC)

- [Atlantic Cape Community College Consent Decree \(PDF\)](#)
- [National Federation of the Blind and Two Blind Students Resolve Complaint Against Atlantic Cape Community College](#) - National Federation of the Blind
- [ACCC Press Release \(PDF\)](#) - Dan Goldstein and Trevor Coe
- [Blind Students' Lawsuit Leads to Big Changes at N.J. County College](#) - Kelly Heyboer

Arizona State University

- [Arizona State Settlement Agreement](#) - A.D.A.
- [Advocates for the Blind Sue Arizona State U. Over Kindle Use](#) - Marc Beja
- [Colleges Lock Out Blind Students Online](#) - Marc Parry
- [Lawsuit Over Kindle Navigation by Visually Impaired Settled](#) - Jacqui Cheng

California Community Colleges State Audit

- [California Community Colleges State Audit \(PDF\)](#)

Capella University/WebCT (La Marca v. Capella University)

- [Capella U. Settles Lawsuit Against Former Student](#) - Brock Read
- [Lawsuit Charges Online University Does Not Accommodate Learning-Disabled Students](#) - Dan Carnevale
- [Web CT Criticisms](#) - Wikipedia

Case Western Reserve University

- [Complaint Filed Against Case Western Reserve University](#) - Reading Rights (via the Internet Archive Wayback Machine)

<http://www.d.umn.edu/~lcarlson/ateam/reports/litigation/lawsuits.html>

BIG WIN FOR BLIND SHOPPER IN FIRST U.S. ADA WEB ACCESSIBILITY TRIAL

📅 JUNE 13, 2017



On June 12, a judge in the federal District Court in South Florida made history. That history came in the form of a court order in a lawsuit filed by blind Florida resident Juan

Carlos Gil against regional grocer Winn-Dixie.

The lawsuit argued that the Winn-Dixie website wasn't accessible. Mr Gil could not read the store's online coupons using his screen reader or use other features on the site.

After a two-day trial the court ruled in favor of the plaintiff (Mr. Gil). That order is historic because it is believed that this is the very first trial in an ADA case about website accessibility against a private company, known legally as a public accommodation. Read the [Sevfarth Shaw blog post](#) that identified the historic

Training

1. Links
2. Headings (Semantic Markup)
3. Alt Tags
4. Keyboard Access
5. PDF's

Links

- Link text describes the destination and is understandable out of context. (No “click here” or “learn more”)
- Link text is unique unless the links go to the same destination. (Non-Distinguishable Links)

Links List



img/p alt+1

Read more

15 comments

Document titles and title separators

Read more

14 comments

Read more

One comment

Read more

Move To Link

Activate Link

Cancel

Display

- All Links
- Visited Links Only
- Unvisited Links

Sort Links

- In Tab Order
- Alphabetically

<http://www.standards-schmandards.com/>

Links List



Skip Navigation
Jump to Side Bar
Home
Services
News
Resources
About
Contact
Accessibility Features



Move To Link

Activate Link

Cancel

Display

- All Links
- Visited Links Only
- Unvisited Links

Sort Links

- In Tab Order
- Alphabetically

/services.htm

Headings

1. Semantic markup conveys information about the meaning of the information rather than to define its presentation or look.
2. Especially important for headings
3. Headings should be in order and not skip levels
4. All pages should have an H1 heading (SEO)

Headings

61% of screen reader users reported that the first thing they did on a page was to scan the headings using the navigation tools in the assistive technology.

Heading List



BBC Home: 1

Explore bbc.co.uk : 2

Other people are searching for: : 3

Questions of Security : 3

Browse : 3

Business & Money : 4

Children's : 4

Entertainment : 4

Health : 4



Move To Heading

Cancel

Sort Headings

- In Tab Order
- Alphabetically

Display

- All Headings
- Level1 Headings
- Level2 Headings
- Level3 Headings
- Level4 Headings
- Level5 Headings
- Level6 Headings



Alt Tags

- Read by screen readers in place of images allowing the content and function of the image to be accessible to those with certain visual and cognitive disabilities.
- Writing good alt tags is an art. Understand the purpose and context of the image.
- Be succinct.
- Don't use "Image of" or "Picture of"
- Images that are purely decorative should use a null alt tag (alt="")

Keyboard Access (Manual Testing)

- Look for “Skip Links” Navigation
- Move through the page using the tab key, checking to make sure you can get to each item and that the order makes sense.
- Make sure the item that has “focus” looks different.
- Make sure you can activate each actionable item (Enter key simulates a “click”)



Take the #NoMouse Challenge!

What is it?

The #NoMouse Challenge is a global effort to raise awareness about *accessible web design*. Just follow these three simple steps:

Step 1. Use the Web without a mouse

If you or your organization has a website, try using it without a mouse. Use the keyboard instead. If you don't have a website, try a few of your favorite websites without a mouse, just using the keyboard. See below for *Tips for using the keyboard to access web pages*.

As you do this, ask the following questions:

1. Can I access all features?
2. Can I operate all buttons, sliders, and other controls?
3. Can I easily tell where I am on the page?

Step 2. Learn more about accessible web design.

See the section below titled *What is accessible web design?*. If you're a person who designs or develops websites, creates videos, or produces digital documents, always consider whether the content you're producing is accessible to everyone. Try to learn and apply new skills that will help you to produce more accessible content.

Step 3. Spread the Word!

Use the #NoMouse hash tag wherever hash tags are supported.



PDF'S (and other non-html documents)

1. There are approximately 80,000 PDF's and 3,000 Word documents on buffalo.edu
2. Acrobat Pro and Microsoft do a decent job of addressing accessibility issues
3. Sample process

Updating the Finish in Four Curricular Plans (using Excel 2013 and Acrobat Pro X)

In Excel

1. Change default language to English
2. Add Alt tags to the two images in the header
3. Update the meta-data as needed (title, description, keywords)
4. Save Excel document
5. Create PDF (Save as PDF)
 1. Check “minimum size” radio Button
 2. Open options
 1. Print specific number of pages required (usually 1-2)
 2. Check box for “document structure tags for accessibility”
 3. Save

In Adobe Acrobat Pro

1. Check the following
 1. Full accessibility check (under tools)
 2. All pages were properly printed, and no blank pages
 3. Meta data (file > properties > Additional Metadata)

Testing

1. Site-wide automated testing tools
2. Browser Plugins
3. Screen Readers (NVDA and Apple VoiceOver)
4. Manual Testing

<https://dobe0002.github.io/minnewebcon2017/>

Primary Accessibility Standards

1. The site can be navigated using only the keyboard
2. All pages have the appropriate heading structure
3. All forms can be used with assistive technology (including search)
4. The site provides “skip links” navigation
5. All links are descriptive (no “click here”)
6. All links are distinguishable (go to the same location)
7. All images have the appropriate alt tags
8. All videos have the appropriate captioning
9. All pages have the required color contrast minimums
10. All PDF's have baseline accessibility (pass Acrobat check)
11. Accessibility Statement (help)

Getting Help



Accessibility at UB

SEARCH

INFO FOR: Students Faculty and Staff Guests

Accessibility Basics Electronic Accessibility Physical Accessibility Policies Accessible IT Working Group > Report an Accessibility Concern



UB is committed to ensuring that everyone can access all that we have to offer. Whether it is access to electronic information technology or physical access to the campus, our goal is to provide seamless inclusion for everyone.

GETTING STARTED

Learn more about why web accessibility is important and how you can help.

- > [Learn about physical and electronic barriers to access](#)
- > [Understand legal requirements](#)
- > [Find out how to report non-functioning door openers, report an accessibility](#)

PLANNING AN EVENT

Tips to ensure that your presentation, conference, search committee interview or other event is accessible to people with disabilities.

- > [For search committees](#)
- > [Accessible meetings and events](#)

CREATING ACCESSIBLE CONTENT

Learn how to ensure that the courses, videos and documents you create are fully accessible to individuals with disabilities.

- > [Documents](#)
- > [Webpages](#)
- > [Audio and Video](#)

QUICK LINKS

- > [How do I find accessible parking?](#)
- > [How can I request an interpreter or other accommodation?](#)
- > [How can I arrange to renovate an inaccessible space?](#)
- > [Who can I contact with an accessibility concern?](#)

<https://www.buffalo.edu/access.html>

Search WebAIM

Introduction to Web Accessibility

WebAIM Training



We have web accessibility in mind

Our mission is to empower organizations to make their web content accessible to people with disabilities.

Accessibility Training

Whether here in Utah or on-site at your organization, WebAIM can provide comprehensive training to fit your needs.

Technical Assistance

Need assistance implementing accessibility? WebAIM's expert staff can provide the assistance you need.

Accessible Site Certification

As a respected third party accessibility expert, WebAIM can evaluate and certify your site to established web accessibility guidelines.

Evaluation and Reporting

We can provide reports to help you know how accessible your site is and how to make it better.

Community

WebAIM Blog

Newsletter

E-mail Discussion List

Twitter

Current Features

Screen Reader User Survey #6

Responses to the July 2015 survey are now available.

[View the screen reader user survey results](#)

WebAIM Activities

WebAIM Training

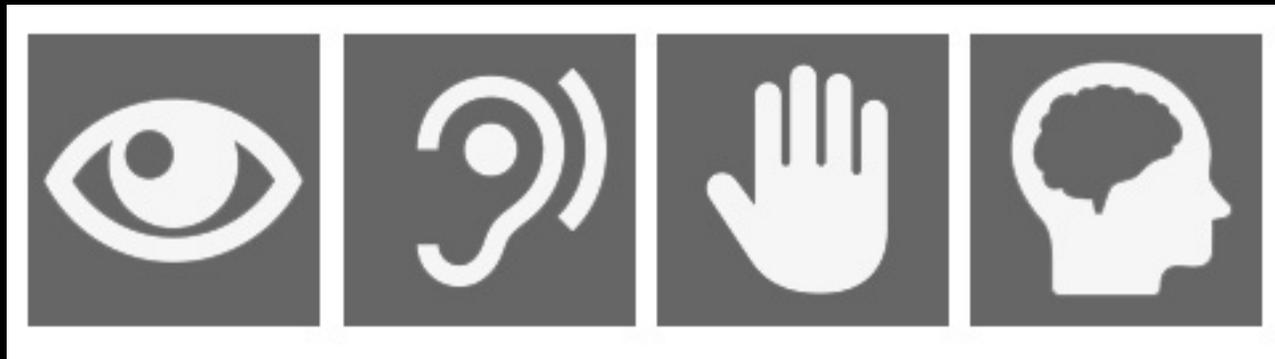
Logan, Utah
June 13-14, 2017

WebAIM Training

Logan, Utah
August 29-30, 2017

<http://webaim.org/>

Concluding Thoughts



Usability for everyone instead of accessibility for a few





Rachael Scdoris

Professional Sled Dog Racer



Country Parkway Web Project - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://markgr.com/cpwebproject/

Most Visited Martingale-style dog c... Charts | Web Resource... Site Administration - ... Pandora Radio - Listen... We Wan Chu Cottages... THE FURNITURE :: Soli... Why my Twitter updat... germanshepherds.co...

Disable Cookies CSS Forms Images Information Miscellaneous Outline Resize Tools View Source Options

Twitter / Home Gmail: Email from Google Gmail - [Country Parkway Web Proj... Country Parkway Web Project

Country Parkway Web Project

Home About This Project About Rachael Links

Find

Feb 17 [Comparing sites](#)

Author: MsB

Take a look at the new site and tell me some of things that you notice have been changed. Think back to all of the different components of a website that Mr. Greenfield talked to us about and explain how these changes make the website easier to navigate. You are all good typers and very vocal students. So, I am looking for longer, detailed answers.

[2 Comments](#)

Feb 6 [site](#)

Author: Stujan

[8 Comments](#)

Feb 5 [Racheal's New Site](#)

Author: Makayla

My dad/Mr.greenfieldlike to announce that Racheal's New Site went live today.

You should cheek out the site at rachaelmushing.com.

Leave a comment on how you like it & what you don't like about it.

[5 Comments](#)

[Edit](#)

Feb 3 [Rachael's Video](#)

Author: MsH

Meta

- Site Admin
- Log out
- Entries [RSS](#)
- Comments [RSS](#)
- WordPress.org

Categories

- Uncategorized (22)

Links

- Documentation
- Development Blog
- Suggest Ideas
- Support Forum
- Plugins
- Themes
- WordPress Planet

Archives

- February 2009
- January 2009

Recent Articles

- Comparing sites
- site
- Racheal's New Site
- Rachael's Video
- Rachael's New Site
- Letter to Mr. Militello
- Websites that need to be fixed
- Rachels WebSites
- Brain Pop graded
- Country Parkway's page graded

http://markgr.com/cpwebproject/site/



RACHAEL SCDORIS

Professional Sled Dog Racer

HOME

RACHAEL'S STORY

RACHAEL'S DOGS

THE IDITAROD

PUBLIC SPEAKING

CONTACT



**** SATURDAY, APRIL 18TH ****
JOIN US IN CELEBRATING OUR NEW GREEN STORE
IN AN EARTH DAY CELEBRATION
OF THE GREATER OUTDOORS

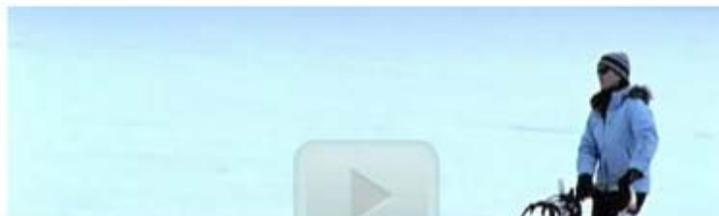


WELCOME

Welcome to my web site! My name is Rachael Scdoris and I am a professional sled dog racer from Bend, Oregon.

I was born with Congenital Achromatopsia, a rare vision disorder causing near sightedness, far sightedness and colorblindness. My dream was always to compete in the Iditarod—the world famous 1,200 mile annual race from Anchorage to Nome, Alaska. As a young girl, I made the decision not to allow my visual impairment to stand in the way of my dream, and I have been racing sled dogs since I was 11 years old. I have experienced some unbelievable challenges and opportunities during my career and am grateful for both the highs and lows. I hope my story can help encourage others to pursue their dreams.

See you on the trail!



Rachael races in the Iditarod to raise funds for CORIL ▶

2009
IDITAROD ▶



Follow Rachael's Progress

FOLLOW ME ON TWITTER

Check this video out -- Rachel Scdoris Iditarod <http://tinyurl.com/dh2egs> 44 days ago

I am really excited to see my Portland friends at the Columbia Sportswear store so I can thank you for your support. C U at 11 today. Rach 49 days ago

I'm looking forward to seeing everyone who can make it to the Flagship Columbia store in downtown Portland from 11 - 1pm on Saturday! 20 days ago

Columbia Greater Rewards members will receive a 1-day 20% discount at the Flagship & PDX stores only! 20 days ago

Lessons Learned

- Web accessibility is not hard – 3rd graders can do it!
- The process is quick and easy if you keep accessibility in mind from the start.
- This is about inclusion and empathy, not about rules and regulations.
- Using personas focuses on the human aspect.



Daisy Suzuki

Although I am deaf I am still having a lot of fun in my life. I don't like it when websites don't have captions.

Daisy had a serious case of meningitis when she was three years old. There were problems and she lost her hearing. (This is how Helen Keller became blind and deaf.) She is very smart and quickly learned sign language. Many of her friends in school learned to sign too. She wants to be a doctor when she grows up.

Age: 10

Grade: 5

Favorite Subject: Math

Family: One younger brother and a dog named Rafe. Lives with Mom and Dad.

Disability: Deaf

Favorite Sites:



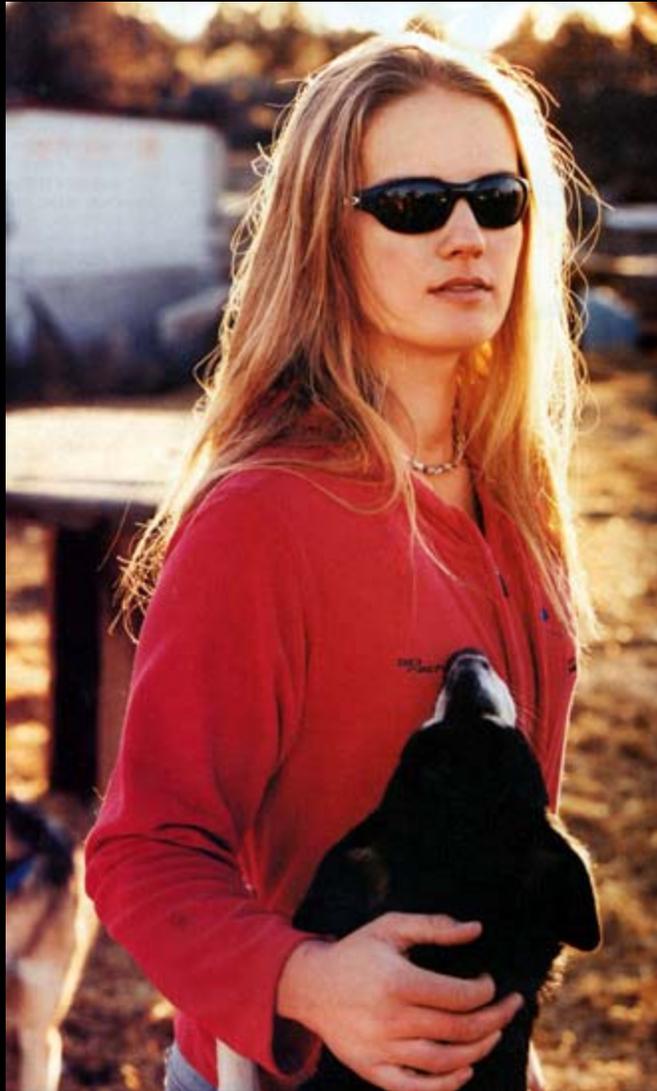
WebKinz



Poptropica



Math Magician



We are all
temporarily abled

Thank You

mark a greenfield